OPERATION ON THE SMARTEAM DATABASE FOR THE INTEGRATION WITH SEE ELECTRICAL EXPERT In order for the **SEE – Smarteam Integration** process to work flawlessly, a certain degree of customization of both the **Smarteam** database, script and the *SEE* environment is necessary.

Smarteam Database

Class Creation for a SEE Document

You can create a new class in the "Document" super class and name it as follows, using the **Smarteam Data Model Designer**:

- Class Name = See Electrical Expert Document
- Display Name = See Electrical Expert Document

Note

Make sure the "Add as Top Level" option is checked.

You can also specify an icon for this new class.

Definition Sam	ple Entities			
Class Name	See Elect	trical Exper	t Docum	Class mechanisms
Display Name	See Elect	trical Exper	t Docum	 ✓ File Control ✓ Revision Control
Table Name	TN_SEE	_ELECTRI	CAL_EX	WorkFlow Jo XML ACAD Decument
Class Prefix	SEE_ELE			ACIS
🔽 Add as Top L	evel			CATIA Analysis CATIA Analysis Computations CATIA Analysis Input CATIA Analysis Results
Icons	Open	Close	Leaf	CATIA CADAM
Change	see	erere	501S	CATIA Design Table

Class Creation for Appended Document

You can create a new class in the "Document" super class and name it as follows, using the **Smarteam Data Model Designer**:

- Class Name = See Appended File
- Display Name = See Appended File

Note

Make sure the "Add as Top Level" option is checked.

You can also specify an icon for this new class.

Definition Sam	ple Entities	
Class Name Display Name	See Appended File	echanisms ument Behavior
Table Name Class Prefix	TN_SEE_APPENDED_FILE	rsion Control
🔽 Add as Top L	evel) Document IA Analysis IA Analysis Computations IA Analysis Input IA Analysis Results
Change	Open Close Leaf CAT	IA CADAM IA Catalog IA Design Table 🛛 🔪 allnfo

Composition Rule Setup

- Select the "Document Tree" link using the Smarteam Data Model Designer
- Click on the *Composition* tab.
- Select the See Electrical Expert Document class from the Class tree view and make sure the See Appended File class is checked, in order to allow appended files to be created as children of SEE documents.



File Type Definition

You need to define a new file type for a *SEE* document, allowing **Smarteam** to associate *SEE* with this file type.

• Within the Smarteam Editor, click on Tool/Lookup Tables.

The following dialogue box is displayed:



• Select *File Type* and click the Values button.

The following dialogue box is displayed.

Description	on				
3dmap					
ASCIS AutoCA	D				10
AVI					
bdf					
byu					
CAD Do	cument				
CATIA	Analysis				
CATIA	vnalysis Cor	mputations			
	1001	100	17	1. 971	
	T	÷	2	+ <u>x</u> +	
- Therease	111				
Neme					_
1					
Desc	intion				
	100000				-
-					
	Add	M	oditu	Delet	. 1
-	Dog				<u> </u>

In the *Name* field, type in "See Electrical Expert" and in the *Description* field, type in "See Electrical Expert".

Value <u>N</u> ame:	
See Electrical Expert	
Description See Electrical Expert	
<u>A</u> dd <u>M</u> odify	<u>D</u> elete

• Click the Add button.

You can now close this window, as well as the previous one.

• Within the Smarteam Editor, click on Tool/Application Setup.

The following dialogue box is displayed:

🗶 File Type	
File Types	
General AutoCAD MCAD Part MCAD Assembly Inventor Part Inventor Part Inventor Drawing Image SolidWorks Part SolidWorks Assembly SolidWorks Drawing Microsoft Word Microsoft PowerPoint MicroStation Assembly	Modify I cools
	<u>C</u> lose <u>H</u> elp

• Scroll down until you find the See Electrical Expert file type created in the previous step.

ᆂ File Type			
File Types			
VRML HOOPS HSF	[<u>~</u> [Modify
PDF SolidWorks Assembly Ten SolidWorks Part Template SolidWorks Form Tool Parasolid Binary VDAFS SolidWorks Drawing Tem CATIA Human Data Librar Project definition	nplate plate y		<u>T</u> ools
See Electrical Expert XML	[₩	
	<u>C</u> lose		Help

Select the See Electrical Expert file type, then click

<u>T</u>ools

The following window is displayed:

Tools	
Edit View Redline Print Embedded Viewer	<u>C</u> lose <u>H</u> elp
	Tools <u>A</u> dd <u>M</u> odify <u>D</u> elete
Set Default	

• From the *Tools* section, click the Add button.



The following window is displayed:

Application Tool	5-1.	1	OK
Appleador rook			<u>Unit</u>
Tool pame			Cance
			Help
Original tool name			
Commenting			
Command jine		Par.	
Command line garameters		NO	
Derauk grectory		8	
Switch to directory		10	
		8 ₈₆	
DDE application	DDE topic		
DDE command when running	l Ng	_	

• Select See File from the "Application Tool" pull-down list.

E Add/Modify Tool	×
General Setup Advanced Setup	
Application Tool	OK
	Cancel
Tool <u>n</u> ame	
See File	<u>H</u> elp
Original tool name	
See File	
Command line EV Program Files/Con Electrical Europh//2BC/Con Cofficient/CEC	
E: Mogram Files See Electrical Expert V3H6/See_Soft/exe/SEt B:	
Zommand line parameters	
Default directory	
E:\Program Files\See Electrical Expert V3R6\See Soft\exe %	
Switch to directory	
Switch to directory	
T _o	
DDE application DDE topic	
DDE command when running	
DDE <u>c</u> ommand when not running	

Note

As you make your selection, many other fields will be automatically filled in. Leave them with their default values.

- Click OK.
- Then click on the *Embedded Viewer* tab.

Embedded Viewer

• From the *Tools* section, click the **Add** button.



The following window is displayed:

😤 Update	×
<u>B</u> uilt-In Viewer <u>P</u> lug-In Viewer	ОК
B <u>u</u> ilt-In viewers	
Viewer type: SmarTeam Viewer	Cancel
Plug-In viewer	<u>H</u> elp
Name:	
Class ID:	
Event ID:	
Event_count: 0	
Viewer file extension:	-
Bedline file extension:	
<u>D</u> ut of process	
Copy CAD assembly files	
<u>H</u> ide Toolbars	

- Fill in the values as shown in this previous dialogue image and click OK.
- Click Close on the previous window.

Smarteam Script

Synchronization between a See document and a Smarteam document

It is necessary to connect a specific Smarteam script (delivered by IGE+XAO) on the life cycle operation 'Check Out" and "New Release"; because at the execution of the referred operations, a new Document is created and consequently – a new OBJECT_ID in the Smarteam Database. This script updates the value of the synchronization attribute within SEE with the OBJECT_ID of the new Smarteam Document.

 In the directory Tools\Smarteam integration\script there is the script sync_SMARTtoSEE.bs, (this file is installed by the See Electrical Expert setup). Copy this file in the directory script\ of Smarteam installation directory.

- Launch the Smarteam tools "SmartBasic Script Maintenance"
- Click on the class See Electrical Expert Document and double click in the column "After" of the operation "Check Out"

Script Maintenance					
File Scripts Help					
Artign Clear Delete					
Class Tree	Scripts for Operations				
Class Browser	System User Defined				
B S Classes	Operation	Before	After	Instead Of	^
Projects A Project	Add			a priodorentiste	-0
S Suppler Project	Update				
Documentz	Delete		_		
Set Folder	View Object				
CAD Files	Add as Conu		_		
🛞 强 SolidWorks	Outorio		_		
🛞 🛐 Solid Edge	OnLogn				
Mechanical Desktop	Retneve objects				
MicroStation Document	On Browse				
3 Niventor	Object Identification for CAI	D			
🛞 🛐 CATIA V5	On Life Cycle click CheckIn	h ()			
NC NC	On Life Cycle click Check0	lut			
CAD Document	On Life Cycle click Release	i l			
B IN IGEXAD	On Life Cycle click New Re	lease			
See Electrical Expert Documen	On Life Cycle click. Obsolet				
See Appended File	On Life Cycle click Copy Fil	le.			
S Image	On Arthenticate Liner	-	_		
B S General Processes	Associate with Deciset				
Request for Quotation	Associate with Project		_		
S Customer Complaint	Share Secured By		-	_	
Helease Process Si Engineering Change Processet	Check Out				
N ECR	Check In		-		
- 😼 ECO	Release				
- S Field Change	New Release		0		
S Temporary Change	Obsolete				
Materials	Edk				
Material	View				
🕀 🔂 items	Bedine				-
Standard Items	×	_			×

• At this window you select the script **sync_SMARTtoSEE.bs** (in the first part "*file name"*) with a double click, the script appear in the second part (*Functions*) and in the third part we have the code. Click the button OK to validate the window.





• Repeat the same operation on the life cycle "New Release", for to have the following result :

SEE Environment

It is necessary to specify, in SEE, various settings for proper synchronization with Smarteam.

• Click Environment/Methods within the SEE Editor.

The following window is displayed:

Project & Sheet N	Sethod		
A IEN	百合 陸田 十十		
Project	E Lat of Methods	Standard Riches Protect)	
Propert & Sheet Propert & Sheet Propert & Sheet Property Language Langu	Adore Project Adore Project Stact Stact Andre Antrologie Available Rethods Sobet Antrologie Antrologie Antrologie Antrologie	Default Title Block Conducted Science Column() Lines Conductors Conductors Column() Lines Conductors Conductors Column() Lines Conductors Conductors Column() Lines Conductors Conductors Conductors Column() Lines Conductors Conductors Conductors Column() Lines Conductors Conductors Conductors Conductors Column() Conductors Column() Conductors Column() Column() Conductors Column() Column() Column() Column()	
CAPROGRAM FILES/SEE	ELECTRICAL EXPERT YOR AVPROJ	ICCTS(TEST INVES APD)	

Click Product Integration in the left section.

The following depictive icon is contained there:



Data Model

This tab allows specifying the SEE settings to use for proper synchronisation with SmarTeam, ex:

marTeam Synchronization				
Attribute Name for Synchro	onization: SMARTE	SMARTEAMID		
marTeam Classes Used-				
Class Used for SEE Projec	sts: See Elec	See Electrical Expert Document See Appended File File Type		
Class Used for Attached F	iles: See App			
	, ···			
ook Up Class Name	File Tupe			
COOK OP CIASS Maille	I lie Type			
LUOK OP Class Maille	Ji lie Type			
marTeam File Types	piects:			
marTeam File Types	rojects:			
marTeam File Types File Type Used for SEE P See Electrical Expert	rojects:			
marTeam File Types File Type Used for SEE P See Electrical Expert Class Used for Attached F	rojects:			
marTeam File Types File Type Used for SEE P See Electrical Expert Class Used for Attached F File Extension	rojects: iles: Class Used	file Ty	pe Us	
marTeam File Types File Type Used for SEE P See Electrical Expert Class Used for Attached F File Extension XML	rojects: illes: Document	file Ty General	pe Us	
marTeam File Types File Type Used for SEE P See Electrical Expert Class Used for Attached F File Extension XML DOC	rojects: "iles: Document Office Document	J File Ty General Microsoft Word	pe Us	

SmarTeam Synchronization

Make sure the proper *Attribute name* is entered in the field:

- SmarTeam Synchronization	
Attribute Name for Synchronization:	SMARTEAMID

The synchronization attribute, specified in the field, is automatically updated in the *SEE* Project when you open it following the execution of a **Smarteam/Life Cycle/Check Out...** or **Smarteam/Life Cycle/New Release...** operation within the *Smarteam* Application.

This attribute has to be created in the "project attributes"

W						
Project 😑 😂	List of Methods	Default (Default metho	d for future Project)			
T	Active Project Active Project Control Contro Control Control Control Control	Project Altributes	Group Attributes Sheet Attribut	es Display const	anit Displa	ey Fike
ts & Altributes	C Available Mathada	Name	Description	Initial value	Format	1
-	Available methods	01	Project Title		Format	Ves
17 N	E Sheat	02	Project Title Line 2		Format	Yes
	N Stighter	03	Project Number		Format	No
	A Default for IEC thank	04	Customer		Format	No
Hervision	Derauctor IEC cagging	05	Customer : Address Line		Format	No
100 C		06	Customer : Address Line	1	Format	No
		07	Customer : Telephone		Format	No.
		08	Customer : Fax		Format	No
anguage		09	Designer		Format	No
		10	Designer : Address Line 1		Format	No
		11	Designer : Address Line 2	1	Format	No
		12	Designer : Telephone		Format	No
an & Exlaur		13	Designer : Fax		Format	No
C. M. Contraction	1	14	Designer : Project Number		Format	No
1		DATEPROJCREA	Project Creation Date		Format	No
	1	REVISION	Révision	1	Format	No
	(SEESM01	Attrib1		Format	Yes
Layers		SEESM02	Attrib2		Format	Yes
		SEESM03	Attrib3		Format	Yes
		SMARTEAMD	Smarteam ID	1	Format	No

Note See also : Synchronization between a See document and Smarteam document

The update occurs because at the execution of the referred operations, a new Document is created and consequently – a new OBJECT_ID in the **Smarteam** Database. A special script, previously connected by you to the "Check Out" and "New Release" operations, updates the value of the synchronization attribute within **SEE** with the OBJECT_ID of the new **Smarteam** Document.

(For further information on connecting scripts with life cycles, using **Smarteam** tools, refer to the **Smarteam** Documentation.)

Smarteam Class Used

Make sure the proper values are entered:

Class Used for SEE Projects: See Electrical Expert Document				
Class Used for Attached Files:	See Appended File			
Look Up Class Name	File Type			

File Type Management

Make sure the proper File Type is defined for the SEE Document:

S	imarTeam File Types
	File Type Used for SEE Projects:
	See Electrical Expert

For each file extension you wish to be identified as an appended file, make sure the proper association is made between the file extension, the class used for this extension and the **Smarteam** file type used.

Class Used for Attached Files:				
File Extension	Class Used	File Type Used		
XML	Document	General		
DOC	Office Document	Microsoft Word		
XLS	Office Document	Microsoft Excel		

Advanced Settings

Normally, the default values for these settings are correct for most **Smarteam** installations. It is possible to change them simply if you wish to allow some flexibility in case **Smarteam** has to change the system values used by the **SEE – Smarteam Integration**.

Click the Advanced... button.

The following window is displayed:

Directory information:	DIRECTORY	
File name information:	FILENAME	
File type information:	FILETYPE	
File description information:	TDM_DESCRIPTION	

These settings define which **Smarteam** attributes are used for the directory information, the file name information and the file description information.

The File description Information attribute will be the attribute used for create the name of new see document with the command "Save As" of Smarteam menu in See Electrical Expert.

• You can then change any of these values, if needed.

Attribute Mapping

Within this tab you define the correspondence between *SEE* Project attributes and SmarTeam Document Object attributes.

Standard (Active Project)							
Data Model Attributes Mapping							
SEE Project Attribute		SMARTEAM Attribute	Priority				
PROJ_TITLE	Ŧ	TDM_DESCRIPTION	SEE	-			
CUSTOMER	•	TDM_CUSTOMER	NONE	-			
DATECREATE	•	TDM CREATE DATE	SMARTEAM	-			
REVISION	•	TDM_REV	SMARTEAM	-			
	•						
	Active Project) a Model Attributes M SEE Project Attributes PROJ_TITLE CUSTOMER DATECREATE REVISION	Active Project) A Model Attributes Mag SEE Project Attribute PROJ_TITLE PROJ_TITLE CUSTOMER DATECREATE REVISION	Active Project) Attributes Mapping SEE Project Attribute PROJ_TITLE PROJ_TITLE TDM_DESCRIPTION CUSTOMER DATECREATE TDM_CUSTOMER TDM_CREATE DATE REVISION TDM_REV	Active Project Attributes Mapping SEE Project Attribute SMARTEAM Attribute Priority PROJ_TITLE TDM_DESCRIPTION SEE CUSTOMER TDM_CUSTOMER NONE DATECREATE TDM_CREATE DATE SMARTEAM REVISION TDM_REV SMARTEAM			

"SEE Project Attribute" Field

Click on the within this field to select, from the scrolling list that opens, the desired project attribute to map - you cannot type in this field.

The list contains all SEE Project Attributes listed by their names, read from the **Sheet & Attributes** method.

"SMARTEAM Attribute" Field

Enter manually the name of the desired Smarteam Attribute to be mapped with the selected SEE Project Attribute.

"Priority" Field

Specify, for your pair of attributes, whether and which one of the two applications – SEE or SMARTEAM – will have priority.

Note

After clicking on the *substantial* button within the field, choose between the three possibilities provided: **NONE**, **SEE** and **SMARTEAM INTEGRATION**.

The **NONE** option is filled in by default whenever you add a new SEE Project Attirbute to map.

After you define a mapping pair, a new empty line automatically appears allowing you to define the next one, if desired.

When you open a **SEE** Project from **SMARTEAM**, the values of the **SMARTEAM** attributes being parts of mapping pairs for which the *Priority* was set to **"SMARTEAM INTEGRATION"** or **"NONE"** are transferred to the respective **SEE** Project Attributes.

Note

You can delete a defined mapping pair by clicking within the **SEE Project Attribute** field to select the whole line and pressing the **"Delete"** key of the keyboard afterwards.

Synchronization between Paired Attributes when Opening SEE Project within

Smarteam

When, within *Smarteam*, you open a **SEE** Project, synchronization process is performed for the paired attributes provided:

• The SEE Project is associated to Smarteam

Thus, when opening the respective **SEE** Project, the Smarteam Document Object associated to this project is identified.

- Pairs of the desired attributes from the two applications were defined in the **Attributes Mapping** tab of the **Smarteam** Method within **SEE**.
 - If, however, one of the attributes, of which a mapping pair is composed, is missing, synchronization is not performed for this pair.
- The *Priority* being set for the particular mapping pairs is "SMARTEAM INTEGRATION" or "NONE".
- The SEE Project is being opened in mode different from "for copy".

If all of the above conditions are satisfied, then when you open a **SEE** Document from **SMARTEAM**, the values of the **SMARTEAM** attributes being parts of correctly defined mapping pairs are transferred to their respective **SEE** Project Attributes associated.

Synchronization between Paired Attributes at Saving SEE Project within

Smarteam

When, within *Smarteam*, you save a SEE Project by either:

executing the Smarteam/Save or Smarteam/Save As... commands

or

- closing the Project

or

 performing any of the Smarteam/Life Cycle... commands such as: Check In, Check Out, Release, New Release, Obsolete, Undo Check Out

Synchronization process is performed for the paired attributes provided:

• The respective SEE Project is associated to Smarteam

Thus, when opening the respective **SEE** Project, the Smarteam Document Object associated to this project is identified.

- Pairs of the desired attributes from the two applications were defined in the **Attributes Mapping** tab of the **SmarTeam** Method within **SEE**.
 - If one of the attributes to compose a mapping pair is missing, synchronization is not performed for this pair.
- The *Priority* being set for the particular mapping pairs is "SEE" or "NONE".

If these conditions are satisfied, when saving a SEE Project within SMARTEAM through any of the actions quoted above, the values of the SEE Project Attributes being parts of correctly defined mapping pairs are transferred to their respective SMARTEAM attributes – on the Smarteam Document Object.